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RECORD NO.

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SHAUGHNESSEY NO.

REVIEW NO.

EEB REVIEW

DATE: IN 02-15-89 OUT MAY 9 1989

FILE OR REG. NO 7969-53, 7969-62

PETITION OR EXP. NO.

DATE OF SUBMISSION 02-08-89

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RD REQUESTED COMPLETION DATE 05-14-89

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RD ACTION CODE/TYPE OF REVIEW 400

TYPE PRODUCT(S) : I, D, H, F, N, R, S Fungicide

DATA ACCESSION NO(S). 409928-01

PRODUCT MANAGER NO. L. Rossi (21)

PRODUCT NAME(S) Vinclozolin (Ronilan)

COMPANY NAME BASF Corporation

SUBMISSION PURPOSE Submission of bee toxicity data

to support proposed use on peanuts

and beans

SHAUGHNESSEY NO. 113201 CHEMICAL, & FORMULATION Vinclozolin % A.I.

EEB REVIEW

Vinclozolin

100 Submission Purpose and Label Information

100.1 Submission Purpose and Pesticide Use

The registrant (BASF Corp.) submitted data from an acute contact toxicity test with honey bees, in support of registration of vinclozolin for use on peanuts and beans.

101 Hazard Assessment

101.2 Likelihood of Adverse Effects on Nontarget Organisms

Honey Bees

Data from a honey bee acute study indicate that vinclozolin is practically nontoxic to honey bees. Hazard to honey bees is not anticipated from the use of vinclozolin.

101.4 Adequacy of Toxicity Data

Data are sufficient to determine that vinclozolin is practically nontoxic to honey bees. Further testing on honey bees is not required for this compound.

103 Conclusions

EEB has reviewed the submitted honey bee acute contact test. The study was determined to be core. The data will be placed in the EEB file for future reference.

Allen W. Vaughan 5.8.89

Allen W. Vaughan, Entomologist
Ecological Effects Branch
Environmental Fate and Effects Division (H7507C)

Norman Cook 5.8.89

Norman Cook, Section Head
Ecological Effects Branch
Environmental Fate and Effects Division (H7507C)

James W. Akerman 5/8/89

James W. Akerman, Chief
Ecological Effects Branch
Environmental Fate and Effects Division (H7507C)

DATA EVALUATION RECORD

1. Chemical: Vinclozolin
2. Test Material: Technical, 99.2% ai
3. Study/Action Type: Honey bee acute contact LD50
4. Study ID: Hoxter, K.A., and M. Jaber. 1988. Vinclozolin: An Acute Contact Toxicity Study with the Honey Bee. Wildlife International Ltd. Project No. 147-135A. Unpublished study submitted by BASF Corporation, Parsippany, NJ. EPA Reg. Nos. 7969-53, 7969-62. EPA Acc. No. 409928-01.

5. Reviewed By: Allen W. Vaughan
Entomologist
EEB/HED

Signature: *Allen W. Vaughan*
Date: 5.8.89

6. Approved By: Norman Cook
Section Head
EEB/HED

Signature: *Norman J. Cook*
Date: 5.8.89

7. Conclusions:

The study is scientifically sound and fulfills the guideline requirement for an acute contact toxicity study on honey bees. With an LD₅₀ > 100 ug/bee, vinclozolin may be characterized as practically nontoxic to honey bees.

8. Recommendations: N/A.

9. Background:


This study was submitted to support registration on peanuts and beans.

10. Discussion of Individual Tests or Studies: N/A

11. Materials and Methods (Protocols):

Apparently healthy worker bees, one to seven days of age, were collected from research colonies. Bees were then transferred directly to the testing laboratory. Test chambers were rolled paper containers. Each container was covered with a plastic petri dish through which a glass vial containing 50% sugar-water was inserted. This food source was available to the test bees throughout the study.

Test bees were maintained in the dark except during dosing and daily observations. Test temperatures ranged from 23 to 27° C.



Five treatment levels, 13, 22, 36, 60, and 100 ug/bee were tested along with a solvent control and a negative control. Two replicates were tested at each concentration with 25 bees per replicate. The solvent control bees received a volume of acetone equal to the largest volume used during the test.

Recently collected bees were immobilized with N₂ to facilitate handling. Each bee was individually dosed on the abdomen with the appropriate test solution. Solvent control bees were dosed with 2 ul of acetone.

Observations on mortality and signs of toxicity were made twice on the day of initiation and once on Day 1 and Day 2 after dosing. The LD₅₀ value for vinclozolin was determined by inspection.

12. Reported Results:

Mortality rates at the 13, 22, 36, 60, and 100 ug/bee dosages did not exceed 18% and did not appear to be treatment related. Mortality in the negative control and solvent control groups was 0% and 8%, respectively.

13. Study Author's Conclusions/Quality Assurance:

The honey bee acute contact LD₅₀ value for vinclozolin for this study was determined to be greater than 100 ug per bee, the highest concentration tested.

A quality assurance statement was included by Marshall Hynson, Quality Assurance Officer for Wildlife International.

14. Reviewer's Discussion and Interpretation:

- a. Test Procedures - Test procedures complied with those outlined in the HED Standard Evaluation Procedure for the honey bee acute contact study. There were no problems in this regard.
- b. Statistical Analysis - Analysis of data was by inspection.
- c. Discussion/Results - The LD₅₀ for the honey bee is greater than 100 ug/bee, the highest concentration tested, for technical vinclozolin. This chemical may be characterized as practically nontoxic to honey bees.

d. Adequacy of the Study

- 1) Classification - Core
- 2) Rationale - SEP protocol; no major deviations noted
- 3) Reparability - N/A.

15. Completion of One-Liner for Study: N/A

16. CBI Appendix: N/A.

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